DOE PAPERLESS DIRECTIVES PILOT REPORT

communication

performance

trust

DIRECTIVES

quality

interface

information

Human Resources and Administration

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HUMAN RESOURCES AND ADMINISTRATION

PAPERLESS DIRECTIVES PILOT TEAM

MEMBERS

Susan Hargrove	HR-4, Office of Information Management
Gail Cephas	HR-4, Office of Information Management
Jim Sledge	HR-4, Office of Information Management
Mike Boblitt	HR-4, Office of Information Management
Willie Bruce	HR-2, Office of Administrative Services
Ilir Angjeli	Enterprise Advisory Services, Incorporated
James McDonald	CIC-15, Los Alamos National Laboratory
Marilyn Pruitt	CIC-15, Los Alamos National Laboratory
Rebecca Hultz	CIC-15, Los Alamos National Laboratory
Julie Rockwood	CIC-15, Los Alamos National Laboratory

CHAMPIONS

Marcia Morris	Associate Deputy Assistant Secretary, Human Resources
Linda Sye	Director, Administrative Services
Howard Lewis	Deputy Chief Information Officer

ACKNOWLEDGMENTS

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•All pilot participants throughout the complex for their involvement and enthusiasm throughout the project.

•All Directives System customers for taking the time to provide their helpful feedback on the survey.

DOE PAPERLESS DIRECTIVES PILOT REPORT

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EXECUTIVE SUMMARY

To improve communication, facilitate the distribution of directives, and realize cost savings, the Offices of Organization and Management (HR-6), Information Management (HR-4), and Administrative Services (HR-8) joined forces to reduce and/or eliminate paper distribution of DOE directives by means of the automated system for DOE Directives On-Line: Explorer. This project began with a 3-month pilot (October 96–January 97) to assess existing operations practices, streamline the Directives System process, and improve automation. Fourteen Headquarters, Field, and contractor organizations participated in the pilot.

During the pilot, each organization relied on Explorer for copies of directives. Throughout, the Paperless Directives Team monitored progress and communicated with participants through monthly video conferences. Although some organizations described automation or equipment problems early on, very few sites experienced ongoing difficulties during the pilot.

In December 1996, the team developed a survey to rate Explorer on such issues as current electronic connectivity, software, and problems caused by eliminating paper copies. The survey prompted a total of 417 responses. Of the approximately 500 (HR-8) Distribution Mailing List addressees for Headquarters Offices, Field Offices, and DOE contractors, 237 responded (approximately 47.4 percent). Of the approximately 280 customers registered to receive electronic notifications of DOE directives at the time the survey was conducted, 180 (64.2 percent) responded. Sixty-six percent of the respondents were federal employees and 34 percent were DOE contractors. Approximately half of the federal respondents were from Headquarters, and approximately half were from the field.

Survey results indicate the following about the respondents.

- 95.1 percent have Internet access; 4.9 percent do not.
- 79.6 percent use Acrobat Reader software; 20.4 percent do not.
- Approximately 28 percent reported minor computer-related and conceptual issues with using a paperless system.
- 70 percent do not rely on paper copies of directives and 30 percent do.
- More than 90 percent rated Explorer good to excellent.

These findings indicate that paperless distribution would work without difficulty and that Explorer greatly enhances implementation of the DOE Directives System. Accordingly, the Paperless Directives Team has begun the transition to paperless directives distribution throughout DOE using the three-phased approach outlined below.

PHASE I (July 1997-Oct 1997)

- Request directives points of contact to:

    – explain the benefits of the Paperless Directives System, and
    – explain how the Paperless Directives System works.

- Begin testing the Explorer "Review and Comment" feature as part of the Paperless Directives System coordination process.

- Implement the Paperless Directives System at 50 percent of DOE elements.

PHASE II (Nov 1997 - Feb 1998)

- Post Paperless Directives System Pilot results and solicit additional feedback from customers.

- Initiate Explorer "Rogue Page" feature.

- Survey customers to rate Explorer and solicit suggestions for other publications that should be published on Explorer.

- Continue testing the Review and Comment Feature on Explorer, which will allow users to comment on directives on-line.

- Conduct Focus Groups in Headquarters to collect data on the DOE Directives System - Part I.

PHASE III (March 1998 - June 1998)

- Encourage other DOE organizations (i.e., Office of Environment, Safety, and Health for Standards; Office of General Counsel for the Federal Register, Rules, Regulations; and DOE libraries for other publications) to post their documents on Explorer.

- Conduct Focus Groups in the Field to collect data on the operations of the DOE Directives System - Part II.

- Implement the Paperless Directives System at an additional 30 percent of DOE elements.

DOE PAPERLESS DIRECTIVES PILOT REPORT

"I believe in products, not paper; production, not process; action, not reaction." Federico Peña.

DOE has worked hard to streamline the Directives System, thereby improving communication and facilitating the distribution of Orders, Manuals, and other directives. In addition to redesigning Directives System procedures to better serve DOE needs, we have reduced the number of "burdensome"[1] directives, in keeping with Executive Order 12861 of September 11, 1993, which tasked all executive branch agencies to cut their internal regulations by half to streamline and improve customer service to the American people. By September 30, 1995, DOE had reduced its Orders by 50 percent, 1 year ahead of the Administration's deadline. By the end of FY 96, DOE had reduced internal directives by an additional 14 percent. In addition, field elements continued the effort by reducing supplemental directives by more than 85 percent.

EXPLORER

Explorer is a World Wide Web application that offers powerful capabilities: immediate access to an electronic library of all current directives,[2] including revisions; complete search and retrieval capabilities; and on-line help to system users. Since it was introduced in November 1995, Explorer has quickly become the official online repository of all DOE directives and related documents.

Last fall, Explorer added a feature that notifies users via electronic mail when new directives are issued or existing directives are revised or cancelled. Any individual can register to receive such e-mail messages. Additional features under development include one to customize the notifications users receive to reflect a specific "profile area" of interest and another to handle online comments for draft directives.

THE DOE PAPERLESS DIRECTIVES PILOT

The primary goals of Explorer are to improve communication, shorten the time required to distribute directives, and realize cost savings by eliminating the need to distribute paper copies to DOE organizations and others who have access to Explorer.

Improved Communication

- Through Explorer, Federal and contractor employees are notified simultaneously of new, revised, or cancelled requirements.

- Directives are accessible at personal computers.

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[1] "Burdensome" directives are overly prescriptive, containing procedural details that focus on procedures instead of outcome.

[2] Directives currently managed within the DOE Directives System include Policies (and remaining SENs), Orders, Notices, Manuals, Guides, and Directive Management Documents. Members of Human Resources and Administration are working with the Offices of General Counsel and Environment, Safety and Health to provide a link to DOE Regulations/Rules and Technical Standards.

Improved Timeliness

•   Directives are delivered within 1 to 10 hours of publication, instead of 1 to 10 weeks.
•   Directives can be forwarded electronically within a matter of seconds.
•   Search and retrieval time is minimized.

Reduced Costs

•   Distribution costs (handling and postage) are reduced.
•   Less storage space is required because organizations print only the copies they need and reprint only as required.
•   Copiers require fewer repairs.
•   Fewer layers of control are required.

By decreasing the distribution of the Department's paper copies of directives by 80 percent in FY 1997, an estimated cost avoidance of $355 thousand will be achieved with an accumulated cost avoidance of $1.4 million by the end of FY 2000, as shown in Figure 1.[3]

In September 1996, the Offices of Organization and Management (HR-6), Information Management (HR-4), and Administrative Services (HR-8) joined forces to determine how best to implement the Paperless Directives System throughout the Department.

In October 1996, the team initiated a Departmentwide "Paperless Directives Pilot," taking into account the reduction in distribution of hard copies since Explorer went on line in November 1995. The goals of the 3-month pilot were to assess current operations practices, streamline the Directives System process, improve automation, and realize cost savings as a result. Pilot objectives are listed below.

•   Reduce and/or eliminate paper distribution of directives.
•   Promote use of Explorer.
•   Identify system/automation concerns by site.
•   Begin transition to the Paperless Directives System in 1997.

Fourteen organizations volunteered for the pilot; the Western Area Power Administration (WAPA), Oak Ridge, Albuquerque, and Los Alamos were among the first to express interest, and all other organizations were confirmed by October 5. (See Attachment 1 for a complete listing.)

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[3]   The DOE Distribution Center, which is operated by the Office of Administrative Services, distributes DOE directives, which account for at least 25 percent of the Center's work.
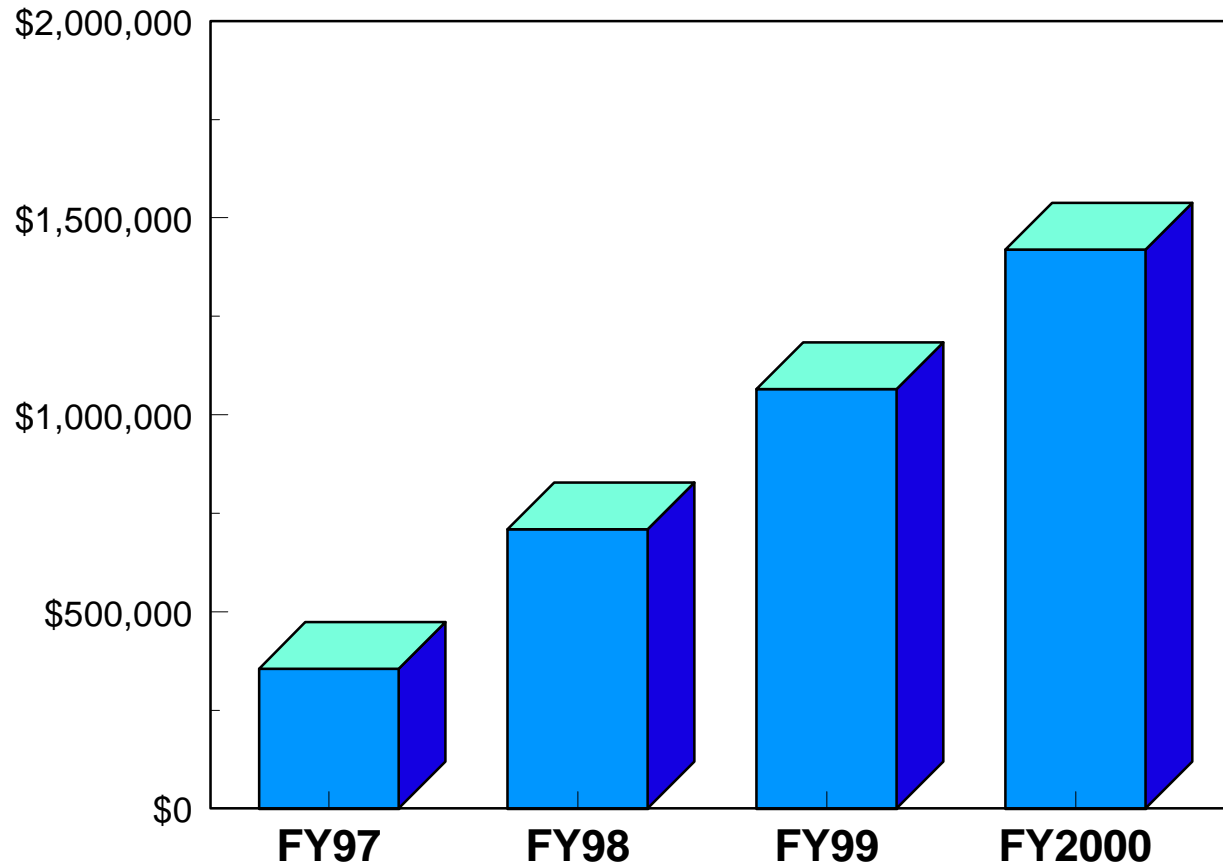
PaperlessDirectives
Cost Avoidance

Figure 1

By decreasing the Department's paper copies of directives by 80% in fiscal year 97, an estimated cost avoidance of $355K will be achieved with an accumulated cost savings of $1.4M by end of fiscal year 2000.

3

During the pilot, participating organizations relied on Explorer for copies of directives. Accordingly, these organizations were removed from the active directives distribution list at the DOE Distribution Center in January 1997.[4] Throughout the pilot, the Paperless Directives Team monitored progress and communicated with participants through monthly video conferences. Although some organizations described automation or equipment problems early on, very few sites experienced ongoing difficulties during the pilot.

At the first video conference, sites described their electronic capabilities and distribution processes and any problems they could foresee.

• Use of different computer equipment hindered electronic communications on-site and communications with contractors off-site.

• One site was unable to access the Internet.

• One site was unable to identify the costs of processing and distributing directives.

Pilot participants made additional comments on the Explorer application. Oak Ridge, Idaho, and Oakland wanted to include Word and HMTL (PDF) versions of directives. Los Alamos National Laboratory (LANL) suggested using one centralized computer to download WordPerfect and convert to Word.

The DOE Paperless Directives Survey

The Paperless Directives Team developed a draft survey, which consisted of five questions asking respondents to rate Explorer and provide information on current electronic connectivity, software, and problems caused by the elimination of paper copies. After much discussion with pilot participants, the team simplified and revised the survey and prepared it for distribution, including distribution via Explorer. The Explorer staff set up a survey data base to collate and tabulate responses. The DOE Distribution Center then distributed copies of the survey to its customers. The Directives Team notified all directives points of contact that the survey was available and asked them to notify their directives customers. All directives customers with on-line access could obtain the survey via Explorer.

A total of 417 customers responded. Of the approximately 500 (HR-8) Distribution Mailing List addressees for DOE Headquarters and field organizations, and DOE contractors, 237 (47.4 percent) responded. Of the approximately 280 customers registered to receive electronic notifications of DOE directives at the time of the survey, 180 (64.2 percent) responded. Sixty-six percent of respondents were federal employees and 34 percent were DOE contractors. Approximately half of the federal respondents were from Headquarters, and

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[4]   In the past, directives were normally distributed to all DOE elements, for a total of about 1800 copies. When pilot participants were removed from the distribution list, distribution was reduced 79 percent.

approximately half were from the field. (See Figure 2.) (See Attachment 2 for a listing of respondents by organization.)

FINDINGS AND CONCLUSIONS

Findings obtained from the Paperless Directives Survey indicate that customers are generally prepared for a paperless system; over 90 percent gave Explorer a good to excellent rating. The findings also indicate that DOE is prepared to transition to the Paperless Directives System; in fact, a number of sites are already paperless.

The following analysis represents the results of the survey.

Question 1. Do you have access to the Internet? Yes___ No___

Most respondents (95.1 percent) have Internet access. (See Figure 3.) The responses indicated that some of those organizations without Internet access either do not know that they can still access Explorer or they do not know how to access Explorer. are not aware of the accessibility. One organization does not have access for security reasons.

Most respondents have Netscape browser software although a few have Microsoft, Mosaic, and Chameleon. This finding is significant because the most frequently used browser, Netscape, is the easiest browser to use with Internet.

Question 2. Do you have Adobe Acrobat Reader software so you can view the Portable Document Format (PDF) file?

Nearly 80 percent of the respondents have Acrobat Reader. (See Figure 4.) This result may indicate that some customers are unaware that the Adobe software is available on Explorer and that a link exists enabling them to download the Acrobat Reader Software without going through the Adobe Home Page. To solve this problem, the link to Adobe now appears immediately after the Directives Page is opened on Explorer. (The link is now identified by a yellow icon.)[5]

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[5]   Explorer allows access to both the ASCII version of a directive and the Adobe, Inc. Portable Document Format (PDF) version. The ASCII format does not have any page structure, but must be included in Explorer—not to be read—but to serve as the vehicle for searching Explorer for a particular directive.   The PDF version, on the other hand, looks exactly like the original paper copy and is the document the reader should use. The PDF version can be viewed and printed using Adobe Acrobat Reader software, which can be downloaded free of charge through Explorer from the Directives Page.
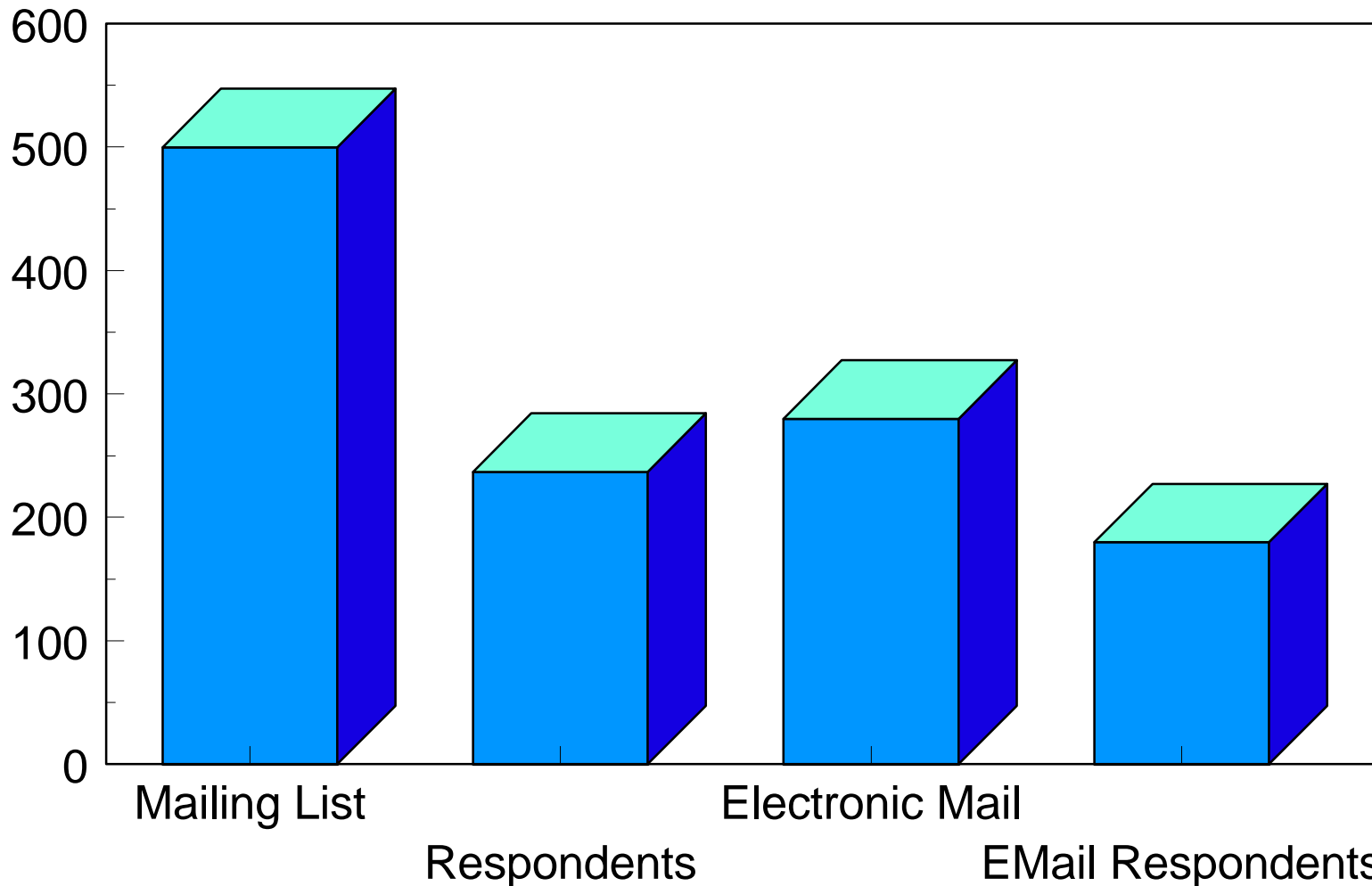
Survey Respondents

Figure 2

A total of 417 customers responded. 237 from the Mailing List and 180 from the customers registered to receive electronic notification
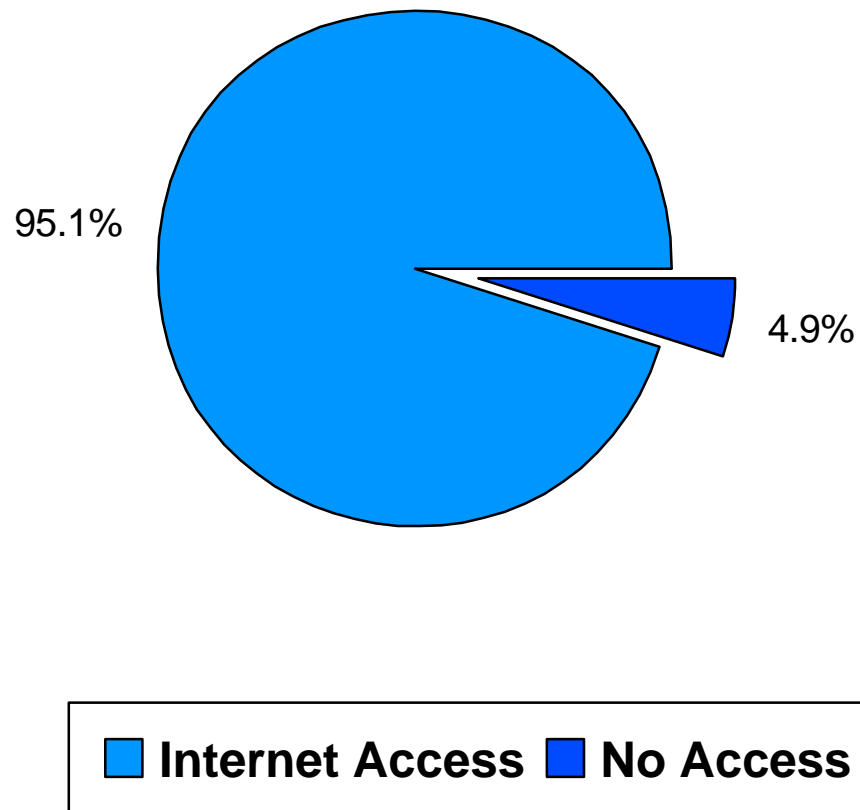
Internet Access

Figure 3

95.1%

4.9%

Internet Access **No Access**

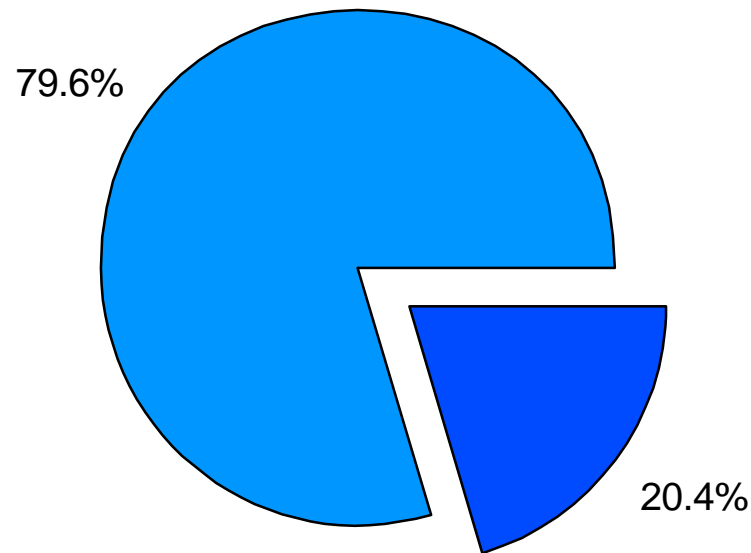# How Many People Have Acrobat Reader Installed

Figure 4

79.6%

20.4%

Acrobat Reader Users **Don't use Acrobat**

Question 3. When the agency moves to a paperless directives system, what problems would you anticipate encountering at your location (e.g., size of documents, printing on site, lack of equipment)? Type "n/a" if not applicable.

Most problems identified by respondents are either computer-related or conceptual problems. The team drew several conclusions from these comments, as summarized Tables 1 and 2 below.

TABLE 1. COMPUTER-RELATED PROBLEMS	
SURVEY COMMENTS	**TEAM CONCLUSIONS**
Lack of equipment	• Inadequate number of computers, outdated equipment • Funding issues
No Internet access	• Need for training • Location not fully automated • Security issues • Perception that using and accessing Internet is time-consuming • Funding issues • Absence of Internet connection
Printing large documents	• Printing is time-consuming • Use of outdated printers • Bottleneck created by shared printers • Waste of paper
Cut and paste difficulties	• Some users' unawareness that the PDF version of a document cannot be edited
Acrobat Reader software use and installation	• Users' limited knowledge of computers • Poor location of the link to the Acrobat Reader software

TABLE 2. CONCEPTUAL PROBLEMS	
SURVEY COMMENTS	**TEAM CONCLUSIONS**
Adjustment to system difficult	• Level of computer knowledge • Resistance to change
Staffing issues	• Insufficient number of people • Insufficient technical expertise
Need 1 year to make transition	• Resistance to change • Lack of flexibility • Lack of readiness • Impact on other systems
Never tried to use Explorer	• Lack of computer knowledge and skills • Fear of technology • Access prohibited for security reasons
DOE culture not ready for paperless system	• Individuals' fear of losing their jobs • Resistance to change • Fear of technology • Old habits • Antiquated methods and procedures • Apathy • Bureaucracy and red tape
Cost benefit vs. cost effectiveness	• Getting the best bang for the buck • Lack of knowledge

Question 4. Will you still need hard copies of published DOE directives provided by the Office of Administrative Services (HR-8)?   Yes__   No__

If "yes", please explain. How many hard copies does your site currently receive? Leave blank if not known.

Nearly 70 percent of the survey respondents answered "no." Those who answered "yes" to this question did so for the following reasons.

Number of Responses	Reasons
52	size of documents
22	training needed
17	printing problem
15	equipment
9	update notification needed
8	Internet access
8	authentic copies
18	other

Question 5. If you have used Explorer DOE Directives Online, how would you rate it?
Excellent＿ Very Good＿ Good(Adequate)＿ Fair＿ Poor＿

Please explain your reasons for a fair or poor rating.

More than 90 percent of respondents using Explorer rated it as good to excellent. Most of those rating it fair to poor stated that they did not use the system. (See Figure 5.) The team concluded that a key to the success of paperless directives would be to conduct outreach to all customers in order to promote Explorer and publicize the benefits of the initiative.

IMPLEMENTATION

As a result of the Paperless Pilot and Survey, the team has begun transition to the Paperless Directives System using the following three-phased approach.

PHASE I (July 1997 – October, 1997)

- Request directives points of contact to:

    – explain the benefits of the Paperless Directives System, and
    – explain how the Paperless Directives System works.

- Begin testing the Explorer "Review and Comment" feature as part of the Paperless Directives System coordination process.

- Implement the Paperless Directives System at 50 percent of DOE elements.
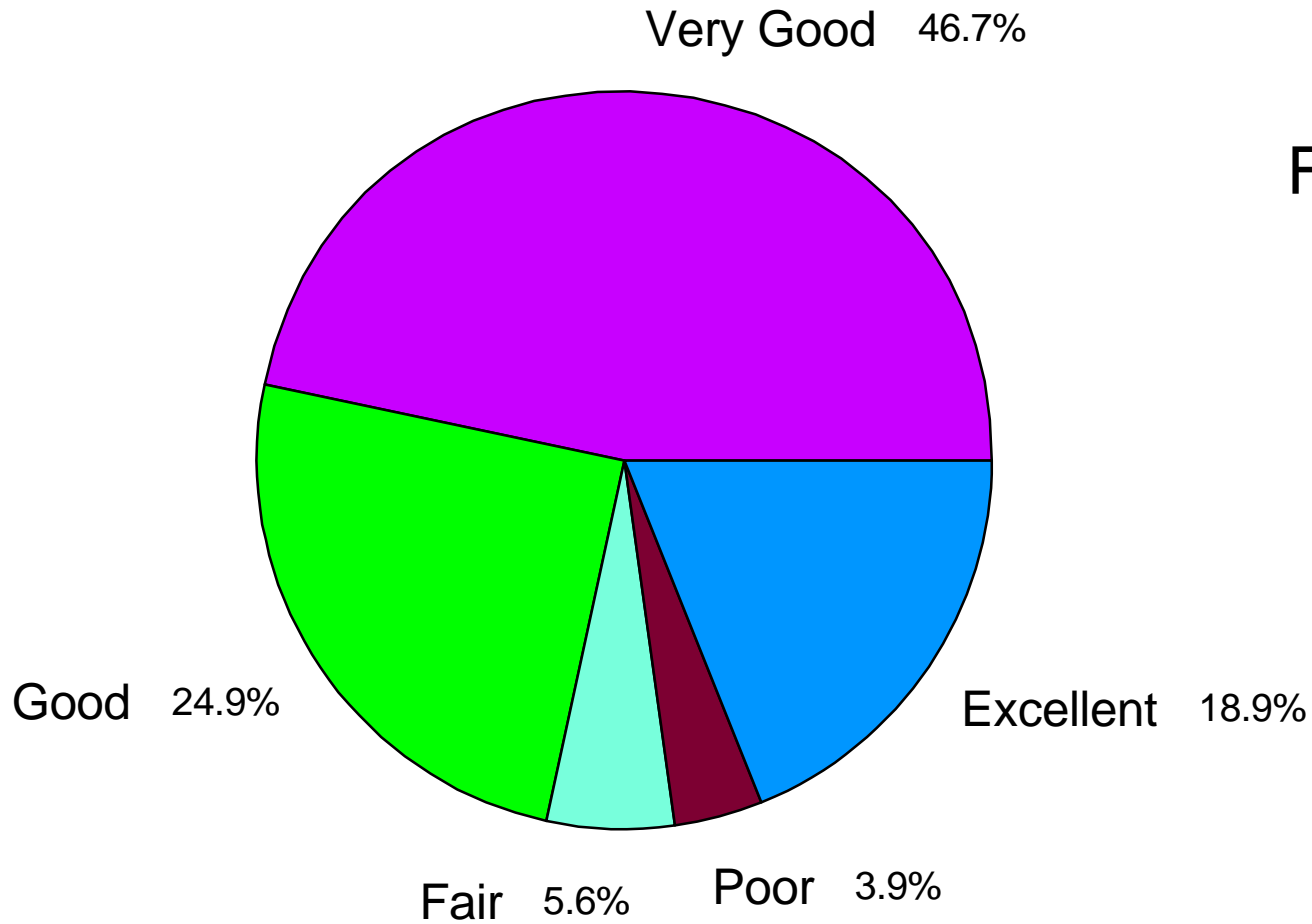
Explorer Evaluation

Very Good   46.7%

Figure 5

Good   24.9%

Excellent   18.9%

Fair   5.6%

Poor   3.9%

12

PHASE II (Nov 1997 - Feb 1998)

●   Post Paperless Directives System Pilot results and solicit additional feedback from customers.

●   Initiate Explorer "Rogue Page" feature.

●   Survey customers to rate Explorer and solicit suggestions for other publications that should be published on Explorer.

●   Continue testing the Review and Comment Feature on Explorer, which will allow users to comment on directives on-line.

●   Conduct Focus Groups in Headquarters to collect data on the DOE Directives System - Part I.

PHASE III (March 1998 - June 1998)

●   Encourage other DOE organizations (i.e., Office of Environment, Safety, and Health for Standards; Office of General Counsel for the Federal Register, Rules, Regulations; and DOE libraries for other publications) to post their documents on Explorer.

●   Conduct Focus Groups in the Field to collect data on the operations of the DOE Directives System - Part II.

●   Implement the Paperless Directives System at an additional 30 percent of DOE elements.

TRANSITION ENHANCEMENTS

In addition to the implementation effort described above, the Paperless Directives Team recommends that DOE pursue the following related activities, which will enhance the transition to a paperless system.

● Purge electronic mailing lists of out-of-date addresses.

● Work with the GPO Superintendent of Documents to publicize the Explorer web site address.

● Establish a printing mechanism for current and archived documents for future use with CD-ROM.

● At Headquarters, promote the paperless initiative further by providing computer terminals to the Freedom of Information Act (FOIA) office and to HR-41 for customers requiring access to Explorer. Other potential sites include the Distribution Center and the Library.

LESSONS LEARNED

- Use of video conferences was very helpful in this effort. Pilot participants expressed appreciation for the face-to-face discussions.

- The survey would have obtained more useful information if the team had more clearly defined its data needs prior to designing the survey so that survey questions could have been more specific.

- The pilot would have proceeded more quickly if team members had been assigned full-time to this project.

- Software better suited to the task of gathering statistical data resulting from the survey should have been selected.

Attachments

PAPERLESS DIRECTIVES PILOT PARTICIPANTS

<u>ORGANIZATIONS</u>

1) Albuquerque Operations Office
2) Office of Defense Programs
3) Office of Energy Research
4) Office of Field Management
5) Human Resources and Administration
6) Idaho Operations Office
7) Los Alamos National Laboratory
8) Nevada Operations Office
9) Oakland Operations Office
10) Oak Ridge Operations Office
11) Rocky Flats
12) Savannah River
13) University of California
14) Western Area Power Administration

Respondents by Organization
(Headquarters)

Organization Code	Organization Title	No. of Respondents
CP	OFFICE OF CONGRESSIONAL, PUBLIC AND INTERGOVERNMENTAL AFFAIRS	1
CR	CHIEF FINANCIAL OFFICER	13
DP	DEFENSE PROGRAMS	24
DS	DEPUTY SECRETARY	1
ED	ECONOMIC IMPACT & DIVERSITY	2
EE	ENERGY EFFICIENCY AND RENEWABLE ENERGY	2
EH	ENVIRONMENT, SAFETY AND HEALTH	20
EI	ENERGY INFORMATION AGENCY	1
ER	ENERGY RESEARCH	2
FE	FOSSIL ENERGY	7
FM	FIELD MANAGEMENT	1
GC	GENERAL COUNSEL	4
HG	HEARINGS AND APPEALS	2
HR	HUMAN RESOURCES AND ADMINISTRATION	35
IG	INSPECTOR GENERAL	2
MD	FISSILE MATERIAL DISPOSITION	1
NE	NUCLEAR ENERGY	11
NN	NONPROLIFERATION AND NATIONAL SECURITY	17
PO	POLICY OFFICE	3

Respondents by Organization
(DOE Contractors)

Organization Code	Organization Title	No. of Respondents
AMAAM		1
	AMARILLO	2
	ALBANY RES CENTER	1
	BATELLE-PENTAX AMARILLO TEXAS	1
CAO	COLUMBUS AREA OFFICE	1
SPRP	STRATEGIC PETROLEUM RESERVE PROJECT	5
LANL	LOS ALAMOS NATIONAL LABORATORY	4
LAAO	LOS ALAMOS AREA OFFICE	1
NREL	NATIONAL RENEWABLE ENERGY LAB	2
LVAO	LAS VEGAS AUDIT OFFICE	1
NVTS	NEVADA TEST SITE	2
	OAK RIDGE ASSOCIATED UNIVERSITY (M&O)	1
	GRAND JUNCTION	1
YMPO	YUCCA MOUNTAIN PROJECT OFFICE	2
ANL	ARGONNE NATIONAL LABORATORY	1
	ASHTABUA AREA OFFICE	1
	BARTLESVILLE PROJECT OFFICE	1

Organization Code	Organization Title	No. of Respondents
	BROOKHAVEN AREA OFFICE	1
	CDM FEDERAL PROGRAMS CORP	1
	FERMI LAB	1
	ARGONNE GROUP	2
	CONTRACTOR(ORIGIN UNKNOWN)	1
CRSP-CSC	CHICAGO REGIONAL SUPPORT OFFICE	1
	NEW BRUNSWICK LABORATORY	1
	IDAHO WEST VALLEY PROJECT OFFICE	1
	WEST MILTON, SCHENECTADY NY	1
	OK PORTSMOUTH SITE OFFICE	2
	PORTSMOUTH GROUP	1
PNRIBO - IDAHO		1
	IDAHO NATIONAL ENGINEERING LAB - LOCKHEED MARTIN	1
INEL	IDAHO NATIONAL ENGINEERING LAB	3
OSTI	OFFICE OF SCIENCE AND TECHNICAL INSTITUTE	1
NPR-CA	NAVAL PETROLEUM RESERVES-CA	2
	NAVAL REACTORS	1

Organization Code	Organization Title	No. of Respondents
	FERNALD - EM PROJECT	1
	FEDERAL ENERGY TECHNOLOGY CENTER	5
	JOINT ATOMIC INFO	1
	KANSAS AREA OFFICE	2
	KIRKLAND AREA OFFICE	1
	OAKLAND BERKLEY SITE OFFICE	1
	PHILADELPHIA REGIONAL SUPPORT OFFICE	1
	PITTSBURGH NAVAL REACTORS	1
	PITTSBURGH ENERGY TECHNICAL CENTER	1
PNNL - ES&H		1
RFETS		3
	CONTRACTOR	1
WSRC		3
	OR LOCKHEED MARTIN	1
ORNL SITE OFFICE		1
	PADUCAH SITE OFFICE	1
	WELDON SPRING SITE	1
	OTHER	1

Respondents by Organization
(Field Offices)

Organization Code	Organization Title	No. of Respondents
AL	ALBUQUERQUE	34
CH	CHICAGO	9
GO	GOLDEN	3
ID	IDAHO	6
NV	NEVADA	1
OH	OHIO	4
OK	OAKLAND	11
OR	OAK RIDGE	33
RL	RICHLAND	15
RF	ROCKY FLATS	6
SR	SAVANNAH RIVER	3
APA	ALASKA POWER ADMINISTRATION	1
BPA	BONNEVILLE POWER ADMINISTRATION	1
SEPA	SOUTHEASTERN POWER ADMINISTRATION	1
WAPA	WESTERN POWER ADMINISTRATION	4